2005
Annual Report

Kansas Childhood Lead Poisoning Prevention Program

Program

The Kansas Department of Health and Environment (KDHE) established the Kansas Childhood Lead Poisoning Prevention Program (KCLPPP) to respond to concerns about lead and its effect on the health of Kansans, most notably our children. Lead is common in our environment and many individuals, especially children, show no outward signs of lead poisoning. A blood level is the only way to identify a child with an elevated blood lead level. Effects of lead poisoning can lead to memory problems, constipation, muscle and joint pains, nausea, weight loss, weak wrists or ankles, or possible kidney problems. In order for KCLPPP to prevent children from lead poisoning, a mission and goals were developed to guide the program.

The mission of the KCLPPP is to prevent childhood lead poisoning through the reduction of lead hazards in the environment. The mission will be accomplished through the following action steps:

- Improve identification of high-risk populations,
- Improve educational efforts to heighten public awareness of potential lead hazards,
- Increase the number of lead safe housing units.

The KCLPPP is divided into four sections: Medical Surveillance for children and adults, Licensure and Certification, Pre Renovation Education and HUD Lead Hazard Control. The Medical Surveillance section is concerned with increasing blood lead screening among children ranging in age from six months to 72 months, considered the at risk age group and adults aged 18 years and older. Increasing primary prevention activities to reduce lead hazard exposure; as well as providing follow up and case management (medical and environmental) to the children and informational packets and surveys to adults with elevated blood lead levels. The Licensure and Certification section is in charge of licensing firms and certifying individuals to perform lead abatement work, lead inspections, and risk assessments. Environmental investigations are crucial in determining the source(s) of lead poisoning. The Pre Renovation Education section is designed to educate the public as well as general contractors and landlords on the hazards associated with remodeling and renovation of pre-1978 housing. The HUD Lead Hazard Control section is charged with identifying 250 housing units in Wyandotte County and reducing the lead hazards in those units.

During 2004, KCLPPP was charged with developing and implementing a plan for Kansas to eliminate lead poisoning by 2010. The elimination plan focuses its goals and objectives on two major areas of health and housing and five essential components. Goals and objectives were developed to address the challenges found in each focus area, followed by strategies and activities that would help reach elimination of lead poisoning in Kansas.

Housing Goal: To eliminate lead hazards from where children live, play, and visit by providing a mechanism to allow the public to make lead-safe housing choices.

Health Goal: To increase the number of children <72 months of age that have received a blood lead test.
To decrease the % of children tested whose blood lead levels are $\geq$ 10 μg/dL.

The elimination plan can be accessed at (http://www.unleadedks.com/lead_elimination_plan.html).

Medical Surveillance- Analysis of Child Data

Lead surveillance data presented here addresses children < 72 months of age, who were tested for lead at least once between January 1, 2005 - December 31, 2005. Data has been derived from the state of Kansas surveillance system, STELLAR[1]. This report uses definitions for surveillance to help its readers better understand charts and graphs.

The Kansas Childhood Lead Poisoning Prevention Program (KCLPPP) currently receives blood lead test[2] results from 21 laboratories both public and private. State regulations have been developed to help increase reporting to the Kansas Department of Health and Environment. The increase in the total number of children tested may be influenced by distribution and discussion of the Revised Kansas Childhood Blood Lead Testing and Case Management Guidelines, adoption of mandatory reporting regulations, and focused efforts of the KCLPPP. The chart below represents children who received at least one blood lead test during each year.

Effective December 2, 2002, Kansas amended the Kansas Administrative Regulation (K.A.R.) 28-1-18 to require laboratories to report all blood lead levels to Kansas Department of Health & Environment (KDHE).

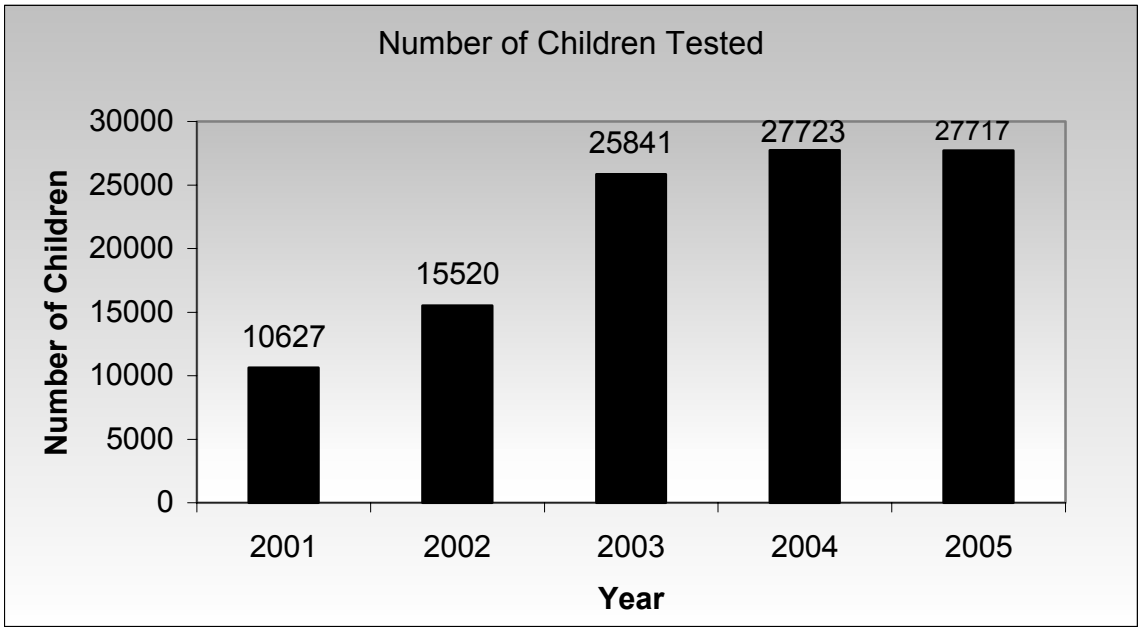


Figure 1: Number of children with at least one blood lead test during year.

[1] Systematic Tracking of Elevated Lead Levels and Remediation (STELLAR).
[2] Test: Any blood lead test (capillary, venous, filter paper, or unknown sample type) on a child that produces a quantifiable result and is analyzed by a CLIA-certified facility or an approved portable device. A blood lead may be collected for screening, confirmation or follow-up.

Lead Poisoning Cases

Kansas identifies lead poisoning cases as a child who has met one of the following criteria:

- ✓ One venous BLL ≥10 ug/dL, **or**
- ✓ Two BLLs of ≥10 ug/dL within 12 weeks collected (capillary or venous)

In 2005, Kansas identified 327 new cases. The following chart shows that 37% of children tested were between 1-2 years of age. This age group also accounts for 42% of new cases identified within the State of Kansas during 2005. The chart below also shows that 38% of identified cases have a blood lead level greater than 15µg/dL.

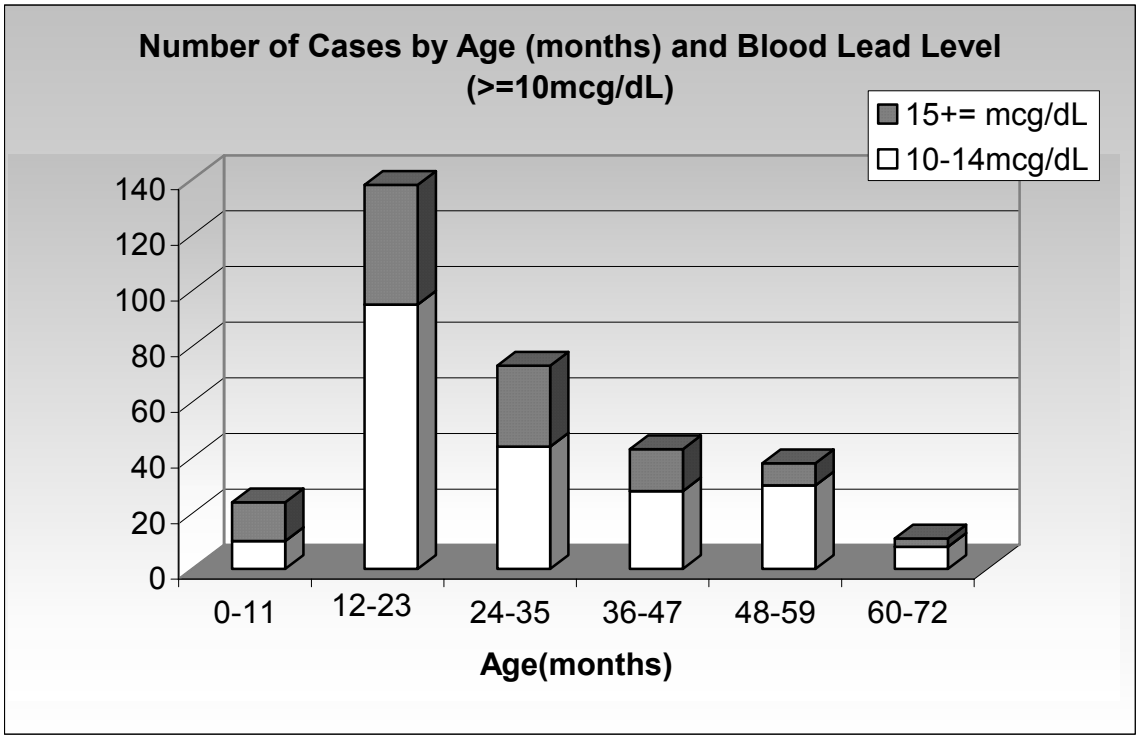


Figure2: Distribution of blood lead levels for ages <72 months.

Case Management & Environmental Investigation

A child identified as a lead poisoning case will receive case management from their private provider or within their local health department. Case management includes: education on nutrition and ways to control lead hazards in the child's environment, retesting of the child's blood lead level to monitor levels, and an environmental investigations. An environmental investigation is provided when a child meets the following criteria:

- ✓ One venous BLL ≥20 µg/dL, **or**
- ✓ Two BLLs of ≥15 µg/dL within 12 weeks collected (capillary or venous)

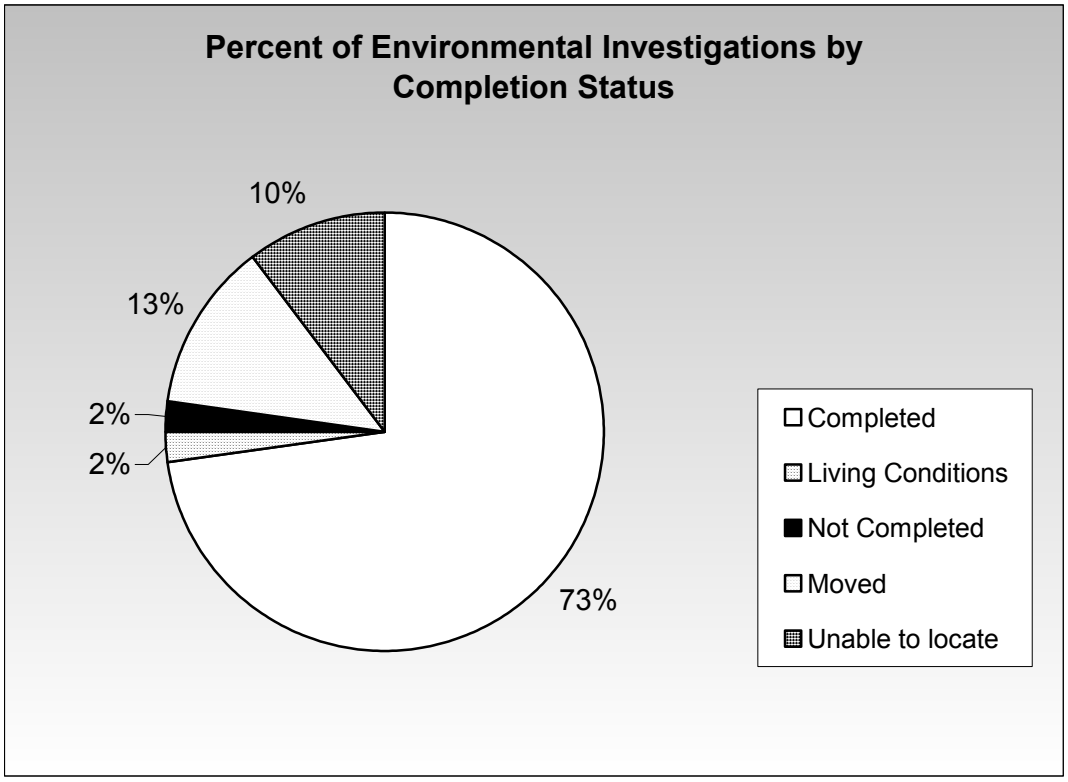


Figure 3: Distribution of environmental investigation completed and not completed.

The above chart shows status of environmental investigations. In 2005, 89 of the 327 cases (27%) required environmental investigations. Kansas has completed 73% of required environmental investigations.

Targeted Screening

In 2002, Kansas developed a decision matrix, which was used to help identify areas within Kansas in which lead poisoning prevalence is estimated to be higher. Six counties that contain the areas of highest risk are[3]:

- Johnson (JO)
- Reno (RN)
- Saline (SA)
- Sedgwick (SG)
- Shawnee (SN)
- Wyandotte (WY)

KCLPPP developed a targeting model and GIS maps to show these areas with the goal of testing, identifying, and confirming more elevated blood lead cases. The first sets of maps was developed in 2003 and are updated annually with testing information to ensure testing and proper case management is being implemented in these areas. *(See attachment for current 2005 GIS map)* During 2005, the six counties identified as high-risk account for 47% of total children tested and 53% of cases identified within the State of Kansas. A lead contract nurse is located in four of the six high-risk counties: SA, SN, SG, and WY.

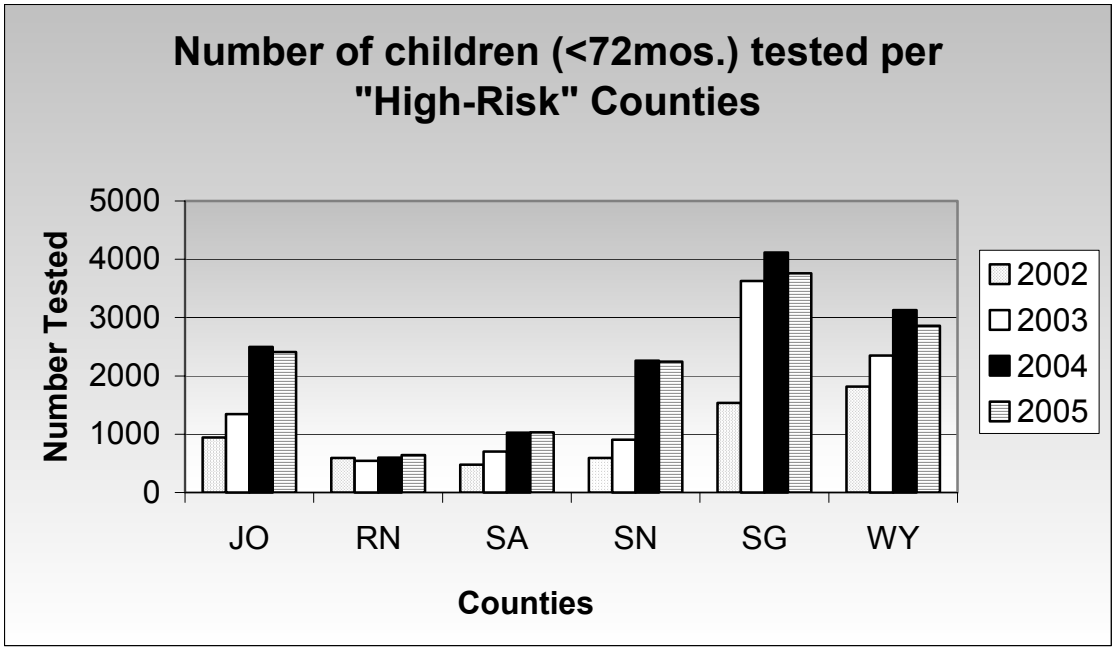


Figure 4: Total children tested within high-risk counties over the last four years.

[3] **High Risk County:** A targeting model was developed to determine "At-Risk" areas using four population-density variables: 1) minority population, 2) impoverished population, 3) children age five and under, and, 4) housing density of pre-1960 construction.

Medical Surveillance- Analysis of Adult Data

KCLPPP continues to receive funding for the Adult Blood Lead Epidemiology and Surveillance (ABLES) program through funding from the National Institute for Occupational Safety & Health (NIOSH). Activities include collecting, monitoring, and sending adult blood lead data to NIOSH and monitors elevated blood lead levels in adults due to occupational or other hazards. Individuals with blood lead levels at or above 25 µg/dL receive informational packets and a survey. The surveys are used to provide more information as to where the individual obtained the lead poisoning.

Lead surveillance data presented below addresses adults ≥18 years of age tested for lead at least once between January 1, 2005 - December 31, 2005. Adult blood lead data is derived from a State of Kansas surveillance system known as the ABLES Database.

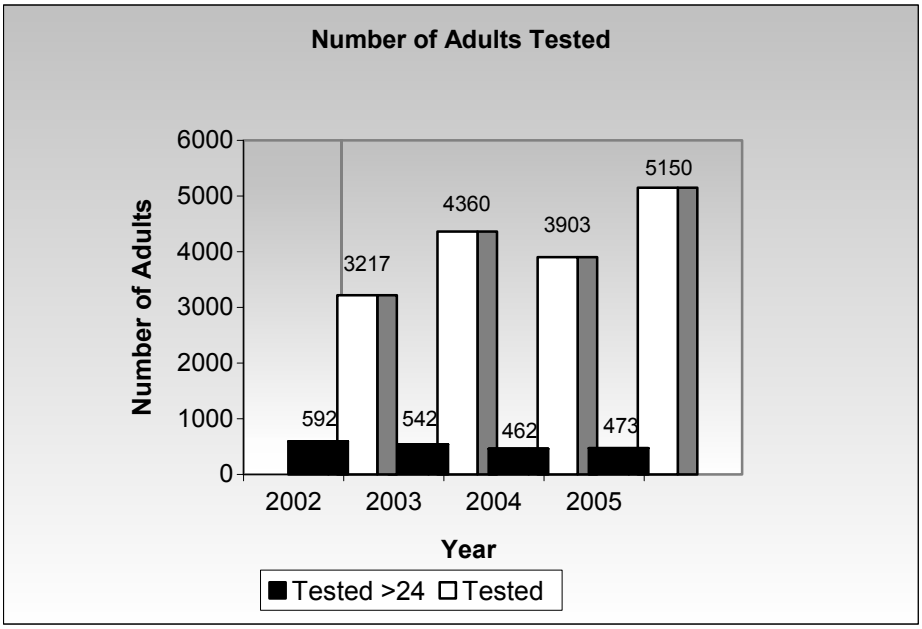
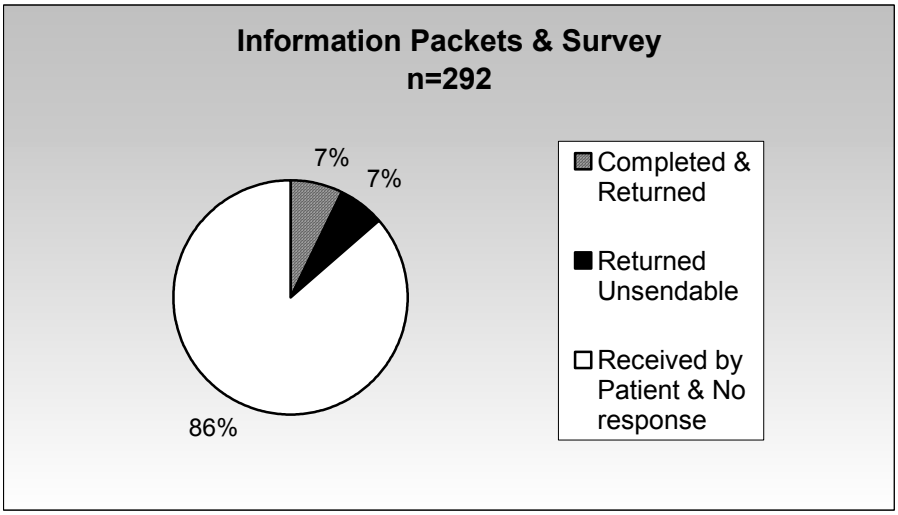


Figure 5: Number of adults tested with at least one blood lead during year and number of adults with a blood lead level >24µg/dL.

Figure 6: Number of information packets and surveys distributed to newly identified patients with blood levels >24µg/dL in 2005.

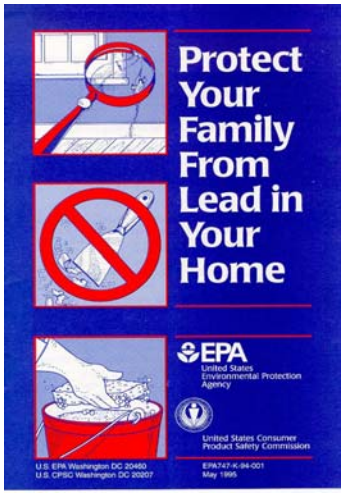


Licensure and Certification

The Licensure and Certification program offers certification for six separate disciplines: Lead Inspector, Lead Hazard Risk Assessor, Lead Abatement Worker, Lead Abatement Supervisor, Project Designer and Elevated Blood Lead (EBL) Investigator. The program also offers accreditation to training providers to offer both initial and refresher training courses for each of the disciplines. The Licensure and Certification program further regulates lead activities in residential housing and child-occupied facilities in Kansas including lead abatement, lead inspections, lead hazard risk assessments, lead hazard screens, EBL investigations and post-abatement clearance.

Accreditation Status Report By Year					
Category	**2001**	**2002**	**2003**	**2004**	**2005**
Individuals					
Inspectors	4	7	4	10	11
Risk Assessors	19	26	10	37	48
Workers	68	48	69	87	172
Supervisors	19	16	13	39	74
Project Designers	0	0	0	1	1
Firms	0	9	10	19	45
Training Courses					
Inspector	NA	NA	NA	NA	23
Inspector Refresher	NA	NA	NA	NA	23
Risk Assessor	NA	NA	NA	NA	23
Risk Assessor Refresher	NA	NA	NA	NA	23
Worker	NA	NA	NA	NA	32
Worker Refresher	NA	NA	NA	NA	25
Supervisor	NA	NA	NA	NA	24
Supervisor Refresher	NA	NA	NA	NA	22
Project Designer	NA	NA	NA	NA	10
Project Designer Refresher	NA	NA	NA	NA	10

Figure 7: The above chart shows the number of individuals certified to conduct and supervise lead activities and the number of training courses provided.



PRE Renovation Education

KS Lead Based Paint
PRE RENOVATION
EDUCATION PROGRAM

The Pre-Renovation Education (PRE) program was designed to provide residents of pre-1978 housing with information to help prevent lead exposure. Contractors, property managers, and others who perform renovation and remodeling work for compensation in residential housing that may contain lead-based paint are required to distribute a lead pamphlet and a renovation notice to the housing owner and/or occupants before renovation begins. An enforcement inspection is conducted to ensure compliance is met. If compliance is not met a non-compliance notice is issued. A notice of intent to assess civil penalty may be issued after a non-compliance notice has been attempted. Notice of intents to assess civil penalty may require an agreement from the contractor to complete additional lead training in addition to a fine.

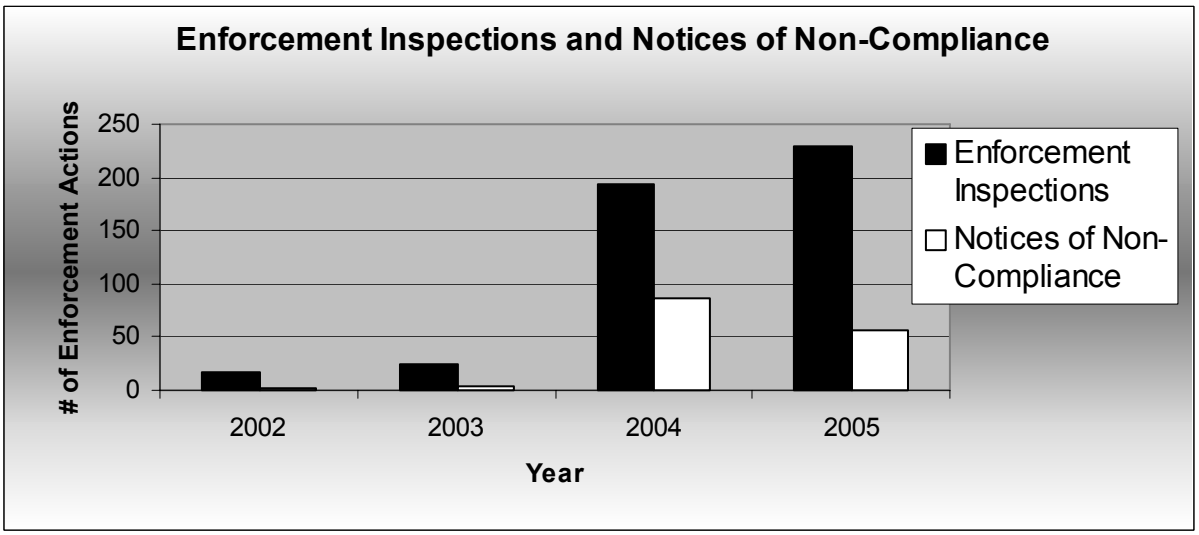


Figure 8: Number of Enforcement Actions and Notices of Non-Compliance from 2002-2005

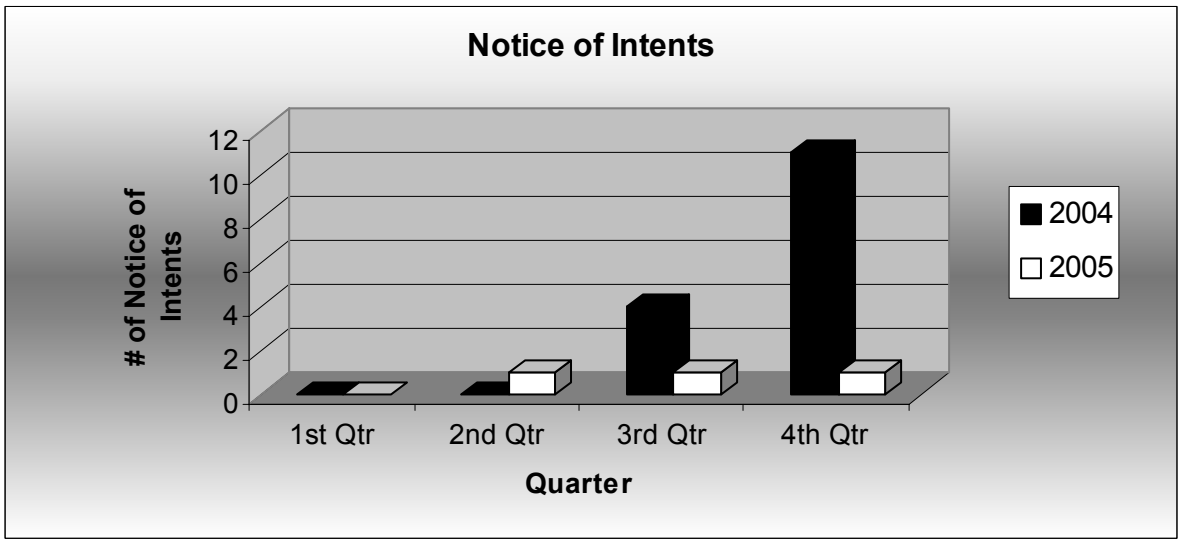


Figure 9: Number of Notice of Intents issued due to non-compliance.

HUD Lead Hazard Control Program-

KDHE's Project Lead Safe KCK, is a HUD Lead Hazard Control Program responsible for identifying and reducing lead hazards in homes built before 1978, to identify lead poisoned children, and to increase community outreach and education. The KDHE Childhood Lead Poisoning Prevention program secured a $2.99 million grant in 2003 for outreach and education, provide risk assessments and clearance examinations in identified housing units, economic opportunities for individuals and businesses, provide lead hazard control interventions in 250 qualified housing units, assisting approximately 300 children from low-income families. This represents approximately one-third of the 900 children that the CDC estimates to have elevated blood lead levels in Kansas City. Grant funding will be used to train lead abatement workers and supervisors. Priority will be given to housing units with children who have elevated blood lead levels and low-income families in the target area. The current grant provides funding through March 31, 2007.

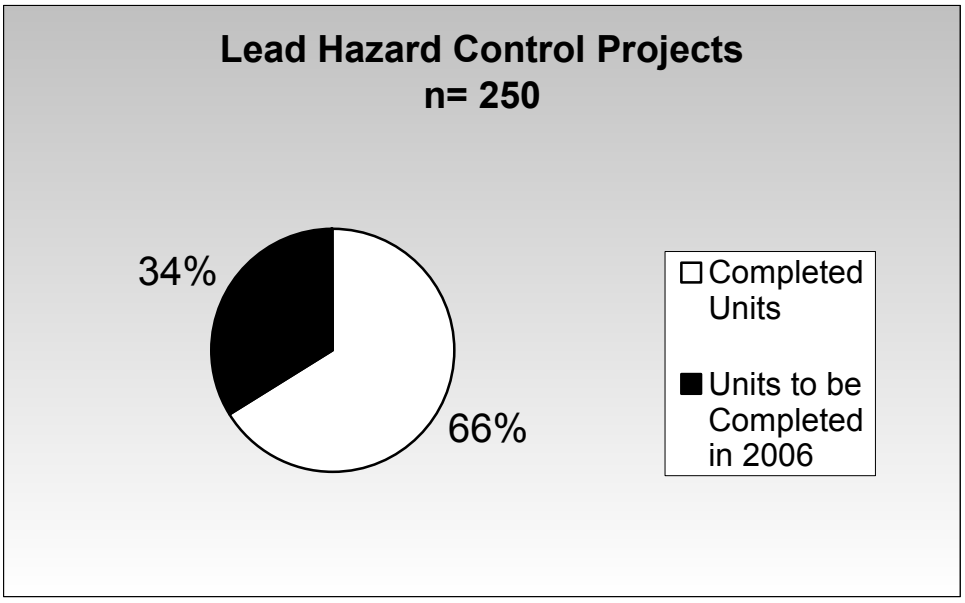


Figure 10: Percent of Project lead Safe KCK units completed as of December 2005.

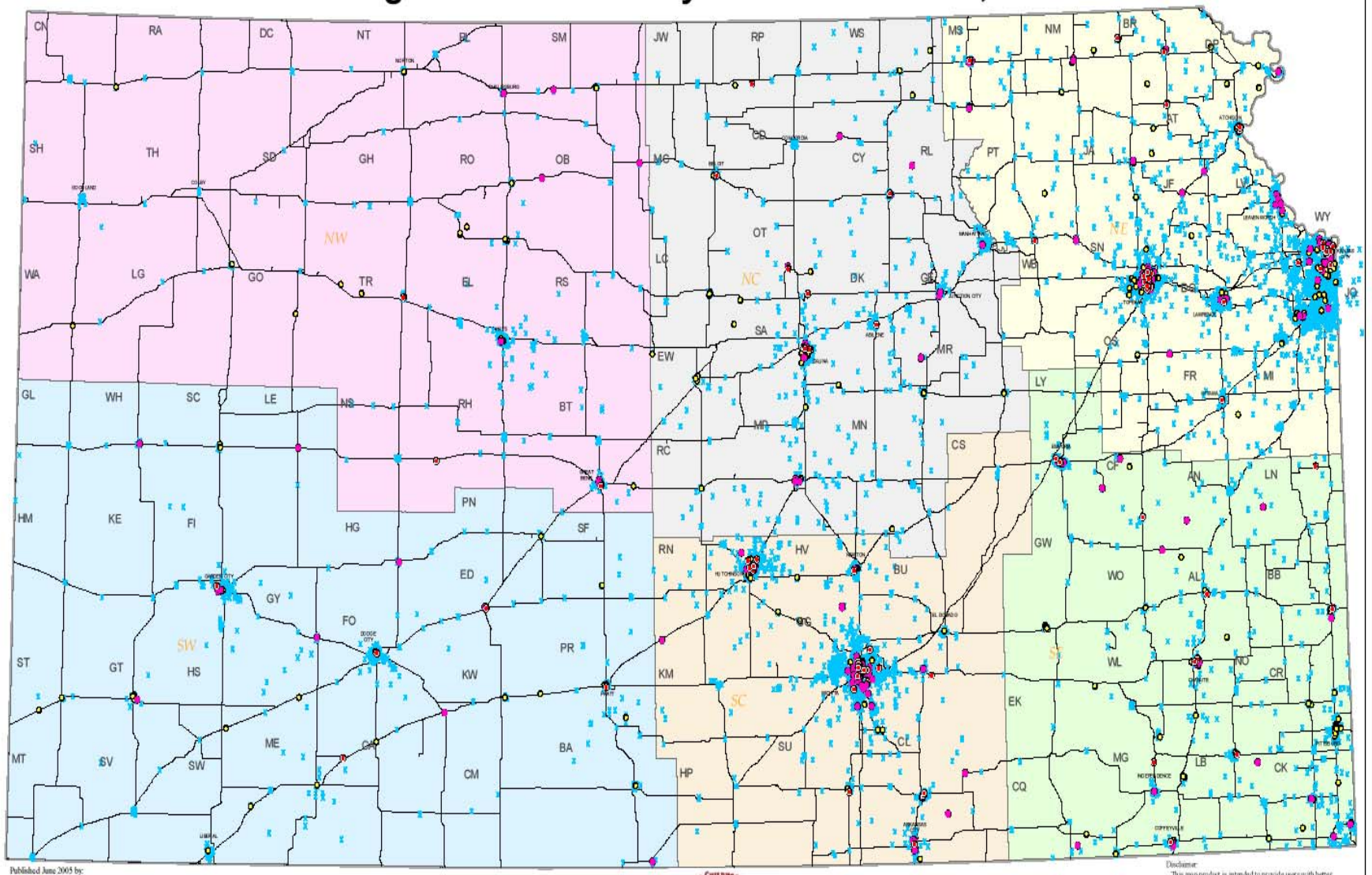
Number of Children 0-72 months of Age, Tested in 2005, According to Blood Lead Levels in Micrograms Per Deciliter

County	Target Population 0-5yrs (2002 Census Estimates)	Total Children Tested	% of Target Population Tested per County	10 to 14 BLL mcg/dL	15 to 19 BLL mcg/dL	20 + BLL mcg/dL	# of Cases
Allen	1056	117	11%	1	0	1	1
Anderson	629	94	15%	0	1	0	1
Atchison	1202	219	18%	8	2	3	5
Barber	246	42	17%	1	0	1	1
Barton	2067	77	4%	4	1	0	3
Bourbon	1071	63	6%	6	1	1	4
Brown	808	85	11%	7	1	5	10
Butler	4764	131	3%	2	0	1	2
Chase	181	12	7%	0	0	0	0
Chautauqua	214	17	8%	1	0	0	1
Cherokee	1659	235	14%	8	0	0	3
Cheyenne	196	20	10%	1	0	0	0
Clark	170	9	5%	0	0	0	0
Clay	547	50	9%	3	0	1	3
Cloud	601	56	9%	1	0	0	1
Coffey	662	29	4%	2	0	2	3
Comanche	153	6	4%	0	0	0	0
Cowley	2756	349	13%	16	7	5	12
Crawford	3027	334	11%	13	1	2	0
Decatur	169	4	2%	0	0	0	0
Dickinson	1290	257	20%	4	2	1	2
Doniphan	579	65	11%	5	1	0	1
Douglas	6752	404	6%	3	2	1	3
Edwards	241	28	12%	3	3	1	1
Elk	151	7	5%	0	0	0	0
Ellis	1821	387	21%	4	0	0	1
Ellsworth	283	74	26%	3	1	0	0
Finney	4789	743	16%	4	0	2	3
Ford	3539	547	15%	2	1	1	4
Franklin	2108	127	6%	1	0	1	1
Geary	3075	94	3%	1	0	0	3
Gove	217	20	9%	2	0	0	0
Graham	137	16	12%	0	0	0	0
Grant	772	81	10%	3	1	1	1
Gray	503	62	12%	1	0	1	1
Greeley	117	9	8%	0	0	0	0
Greenwood	501	98	20%	7	2	1	0
Hamilton	222	1	0%	0	0	0	0
Harper	377	13	3%	0	0	0	0
Harvey	2556	253	10%	7	2	3	5
Haskell	429	82	19%	1	0	0	0
Hodgeman	120	38	32%	0	1	0	1
Jackson	928	147	16%	10	2	1	2
Jefferson	1334	122	9%	3	1	0	2
Jewell	152	27	18%	1	0	0	0
Johnson	40924	2410	6%	20	3	2	7
Kearny	413	27	7%	0	0	0	0
Kingman	594	22	4%	0	0	0	0
Kiowa	197	23	12%	1	0	1	0
Labette	1562	91	6%	4	0	1	3
Lane	118	5	4%	1	0	0	1
Leavenworth	5499	568	10%	7	0	0	6
Lincoln	201	104	52%	5	0	0	0
Linn	703	24	3%	0	1	1	2
Logan	241	11	5%	0	1	0	0
Lyon	2988	264	9%	6	4	6	10

County	Target Population 0-5yrs (2002 Census Estimates)	Total Children Tested	% of Target Population Tested per County	10 to 14 BLL mcg/dL	15 to 19 BLL mcg/dL	20 + BLL mcg/dL	# of Cases
Marion	872	81	9%	0	0	0	1
Marshall	595	102	17%	5	1	1	3
McPherson	1960	220	11%	7	1	1	3
Meade	386	149	39%	3	1	2	1
Miami	2247	55	2%	0	0	0	0
Mitchell	381	111	29%	1	0	1	2
Montgomery	2650	204	8%	5	8	1	8
Morris	403	17	4%	15	1	1	0
Morton	310	16	5%	0	0	0	0
Nemaha	816	64	8%	5	1	1	3
Neosho	1181	262	22%	11	5	2	6
Ness	202	38	19%	0	0	1	1
Norton	370	35	9%	1	0	0	0
Osage	1224	60	5%	2	0	0	1
Osborne	204	5	2%	0	1	0	1
Ottawa	458	62	14%	3	1	2	4
Pawnee	494	23	5%	1	0	0	0
Phillips	457	31	7%	3	0	0	1
Pottawatomie	1570	128	8%	4	1	1	4
Pratt	627	176	28%	4	1	2	1
Rawlins	144	2	1%	0	0	0	0
Reno	4732	643	14%	12	4	7	13
Republic	298	29	10%	1	0	0	1
Rice	706	26	4%	1	0	0	0
Riley	4455	97	2%	1	2	0	2
Rooks	310	66	21%	6	1	0	1
Rush	223	62	28%	0	0	0	0
Russell	407	39	10%	0	0	0	0
Saline	4422	1031	23%	20	9	4	11
Scott	336	33	10%	1	1	0	0
Sedgwick	43355	3759	9%	67	19	18	62
Seward	2615	105	4%	1	0	2	0
Shawnee	13945	2247	16%	62	23	10	39
Sheridan	140	7	5%	0	0	0	0
Sherman	477	35	7%	1	0	0	0
Smith	202	58	29%	3	1	0	1
Stafford	302	26	9%	2	0	0	0
Stanton	224	32	14%	2	0	0	0
Stevens	477	72	15%	0	0	0	0
Sumner	2024	118	6%	1	3	1	3
Thomas	604	12	2%	0	0	0	0
Trego	202	35	17%	1	2	1	1
Wabaunsee	471	33	7%	0	0	0	0
Wallace	117	3	3%	0	0	1	0
Washington	432	48	11%	0	2	1	0
Wichita	211	72	34%	1	0	1	1
Wilson	713	77	11%	1	0	0	0
Woodson	172	27	16%	2	0	0	0
Wyandotte	15431	2862	19%	56	12	14	42
Unknown **		5022					
Kansas Totals	224,165	27,717		495	143	123	327

**** Unknown mean KCLPPP was not provided an address for the child when issued the BL test.**

KANSAS Childhood Lead Poisoning Prevention Program
Testing between January 1 - December 31, 2005



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Information Systems, GeoSpatial Services
Childhood Lead Poisoning Prevention Program

Data Source:
STELLAR Surveillance System
Childhood Lead Poisoning Prevention Program
Kansas Cartographic Dataset

Children Tested for Lead Poisoning

Investigated Cases · Cases · Possible Cases · Tested

KANSAS CHILDHOOD LEAD POISONING PREVENTION PROGRAM — PROTECTING KANSAS KIDS

District Office Boundaries

NC · NE · NW · SC · SE · SW

2005 Program Highlights

- KCLPPP continues to collaborate with Social Rehabilitation Services (SRS) and Centene (previously known as Firstguard) to conduct monthly data matches to help KCLPPP increase identification of Medicaid-Enrolled/Billed children and to help Centene fulfill job requirements to provide case management to children within the state of Kansas.

- KCLPPP is currently working on developing a Lead Elimination Partnership with cities to pass local legislation requiring evidence of Pre Renovation Education compliance prior to issuance of a building permit.

- KCLPPP also continues to establish partnerships with the building supply industry. This partnership was developed to increase regulated community awareness of PRE regulations and requirements.

- KCLPPP continues to attend and educate hundreds of Kansans during home shows, back to school fairs, and other events.

- KCLPPP continues to be one of only two dedicated PRE Renovation Education Programs in the United States since 2000.

- KCLPPP developed and conducted a series of pilot projects within selected counties to increase testing among children < 72 months and pregnant mothers, awareness of lead, and community involvement. Counties in which these projects were conducted are Sedgwick, Shawnee, Wyandotte, and Saline and occurred in gynecology offices, WIC programs, and in low-income housing areas.

- The KCLPPP/HUD program has worked to increase number of housing units from 0% to 66% completed.

This report is the annual overview for 2005-blood lead testing on Kansas's residents. The medical surveillance work for children described here was funded by cooperative agreement award #US7/CCU722846-03 from the US Center for Disease Control and Prevention (CDC).